In the Claims

Please amend claims 1-18 as follows:

1. (currently amended) An echo/near-end-crosstalk cancellation system for a bi-directional data communications system comprising:

a first finite impulse response [[(FIR)]] filter;

a second [[FIR]] finite impulse response filter coupled to the first [[FIR]] finite impulse response filter;

a data partitioning means for partitioning a data signal comprising echo/near-end-crosstalk components such that a first portion of a partitioned data signal is processed by the first [[FIR]] finite impulse response filter to provide a first filter output value, and a second portion of the partitioned data signal ~~comprised of bits having a data size greater than the bit width of the first FIR filter are~~ is processed by the second [[FIR]] finite impulse response filter to provide a second filter output value; and

a combination means for subtracting the outputs of the first and second [[FIR]] finite impulse response filters from the data signal to provide echo/near-end-crosstalk [[(E/N)]] cancellation.

2. (currently amended) The system according to ~~Claim~~ claim 1, further comprising a control means for adjusting the ~~plurality of~~ first and second filter output values.

3. (currently amended) The system according to claim 1, wherein the first [[FIR]]finite impulse response filter and the second [[FIR]]finite impulse response filter are each implemented as a separate integrated circuit.

4. (currently amended) The system according to claim 1, wherein the first [[FIR]]finite impulse response filter is comprised of a plurality of filter elements.

5. (currently amended) The system according to claim 1, wherein the second [[FIR]]finite impulse response filter is comprised of a plurality of filter elements.

6. (currently amended) The system according to claim 1, wherein the data partitioning means comprises a plurality of conductors for conducting the first portion of the data signal to the first [[FIR]]finite impulse response filter and the second portion of the data signal to the second [[FIR]]finite impulse response filter.

7. (currently amended) The system according to claim 6, wherein the first portion of the partitioned data signal is comprised of the least significant bits [[(LSBs)]] of the data signal and the second portion is comprised of the most significant bits [[(MSBs)]] of the data signal.

8. (currently amended) The system according to claim 6, wherein the first portion of the partitioned data signal negates a first portion of an [[E/N]]echo/near-end-crosstalk signal generated as a result of the transmission of the data signal.

9. (currently amended) The system according to claim 8, wherein the second portion of the partitioned data signal negates a second portion of an [[E/N]]echo/near-end-crosstalk signal generated as a result of the transmission of the data signal, wherein the second portion of the [[E/N]]echo/near-end-crosstalk signal is not included in the first portion.

10. (currently amended) The system according to claim 1, wherein the first and second [[FIR]]finite impulse response filters are adaptive type filters.

11. (currently amended) The system according to claim 1, wherein the first and second [[FIR]]finite impulse response filters are non-adaptive type filters.

12. (currently amended) The system according to claim 1, wherein the first and second [[FIR]]finite impulse response filters are digital filters.

13. (currently amended) The system according to claim 1, wherein both the first and second [[FIR]]finite impulse response filters are configured identically in direct form.

14. (currently amended) The system according to claim 1, wherein both the first and second [[FIR]]finite impulse response filters are configured identically in transpose form.

15. (currently amended) The system according to claim 1, wherein the first and second [[FIR]]finite impulse response filters are configured differently, with one being in direct form and the other being in transpose form.

16. (currently amended) The system according to claim 2, wherein the control means for adjusting the ~~plurality of~~ first and second filter output values comprises a multi-tap delay line including a plurality of taps, wherein at least one programmable delay line is interposed between two of the plurality of taps.

17. (currently amended) The system according to claim 2, wherein the control means for adjusting each of the ~~plurality of~~ first and second filter output values comprises at least one holding register in each [[FIR]]finite impulse response filter for implementing a unique one of a plurality of adaptive delays.

18. (currently amended) The system according to claim 1, wherein the first and second [[FIR]]finite impulse response filters filter the data signal using either fixed or floating point numbers.

19. (original) A method for partitioning data words in an echo/near-end-crosstalk cancellation circuit for a communications system, comprising the steps of:

determining a first bit resolution from a predetermined number of a plurality of echo/near-end-crosstalk (E/N) signals having a lowest amplitude;

determining a second bit resolution by subtracting the first bit resolution from a bit resolution of a single signal from a plurality of E/N signals having a highest amplitude; and

partitioning the plurality of E/N signals such that a first portion is processed by a first FIR filter having a data path identical to the first bit resolution, and a second portion comprised of bits having a data size exceeding the bit width of the first FIR filter is processed by a second FIR filter having a data path identical to the second bit resolution.

20. (original) The method according to claim 19, wherein the predetermined number of signals comprises a majority of the plurality of E/N signals.

21. (original) The method according to claim 20, wherein the predetermined number of signals comprises three quarters of the plurality of E/N signals.

22. (original) A method for partitioning a data signal, comprising the steps of:

determining from a plurality of echo/near-end-crosstalk (E/N) signals a maximum bit resolution associated with a single signal having a highest amplitude;

selecting a first FIR filter and a second FIR filter each having a bit resolution equal to at least half of the maximum bit resolution; and

partitioning the plurality of E/N signals such that a first portion is processed by the first FIR filter, and a second portion comprised of bits having a data size greater than the bit width of the first FIR filter are processed by the second FIR filter.